Amendments to the Claims:

1.-10. (canceled)

11. (currently amended) A method for setting limit values of an access control for limiting traffic transmission in a communication network, wherein the communication network comprises a plurality of pairs of marginal nodes between which the transmission occurs, and the limit values of the access control are limit values regarding the pairs, the method comprising the following steps:

setting the limit values such that probabilities for each of the pairs related to not approving the transmission between the marginal nodes of the pair, without explicit path reservation, are substantially the same, and such that an overload situation in the communication network does not occur;

increasing the limit values to a minimum value at which an overload situation starts to occur, such that the probabilities are substantially the same; and

updating the limit value regarding at least one of the pairs of marginal nodes, between which a transmission occurs causing the overload situation, by setting the limit value to the minimum value.

12. (previously presented) The method in accordance with claim 11, wherein the probabilities related to not approving the transmission between the marginal nodes of the pairs are blocking probabilities related to blocking the transmission between the marginal nodes of the pairs.

13. (previously presented) The method in accordance with claim 11, wherein the marginal nodes include nodes of the network representing sources or sinks of traffic of the network.

14. (previously presented) The method in accordance with claim 11, wherein the marginal nodes are specified by ingress nodes and egress nodes of the network.

15. (previously presented) The method in accordance with claim 14, wherein the plurality of the pairs comprises all pairs of the network consisting of an ingress node and an egress node in each case.

16. (previously presented) The method in accordance with claim 11, wherein the overload situation is produced when in a scenario of high traffic load, in which the limit values for the access controls are still adhered to, a threshold value is exceeded on a link for the traffic transmitted over the link.

17. (previously presented) The method according to claim 16, wherein the threshold value for the traffic transmitted over the link is assigned to the link such that in case of failure of the link, the traffic allowed within the framework of the access controls does not represent any overload.

18. (previously presented) The method in accordance with claim 11, further comprising:

further increasing the limit values regarding further pairs of the pairs, which for the limit value is not determined yet, in excess of the minimum value to a further minimum value at which a further overload situation starts to occur, such that the probabilities are substantially the same; and

updating the limit value regarding at least one of the further pairs of marginal nodes, between which a transmission occurs causing the further overload situation, by setting the limit value to the further minimum value.

19. (previously presented) The method in accordance with claim 18, comprising repeating the further steps until the limit values for all of the pairs are determined.

20. (previously presented) The method in accordance with claim 18, wherein the further overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link.

21. (previously presented) The method according to claim 20, wherein the further threshold value for the further traffic transmitted over the further link is assigned to the further link such that in case of failure of the further link, the further traffic allowed within the framework of the access controls does not represent any overload.

22. (previously presented) The method in accordance with claim 11, further comprising:

making access checks for all the traffic of a class of service.

23. (previously presented) The method in accordance with claim 22, wherein the access checks relate to an approval or rejection of individual flows.

24. (previously presented) A network node with means for executing the method in accordance with claim 11.

25. (previously presented) The network node according to claim 24, wherein the network node is a marginal node of the network.

26. (currently amended) A method for setting limit values of an access control for limiting traffic transmission in a packet-switched communication network comprising a plurality of marginal nodes and a plurality of internal nodes, the method comprising:

identifying all pairs of marginal nodes in the network, wherein each pair of marginal nodes is identified as an origination and destination node of a given transmission in a given direction within the network, and not an intermediate internal node in the given transmission;

using a traffic model to set a traffic threshold value for each pair of marginal nodes without explicit path reservation so that blocking probabilities are substantially the same for each pair of marginal nodes;

operating the network with communications traffic;

increasing the threshold values of all pairs of marginal nodes step-by-step until congestion occurs on at least one pair of marginal nodes;

reducing the threshold value on the at least one pair of marginal nodes to the threshold value at the step before the congestion occurred; and

repeating from the increasing step on the remaining pairs of marginal nodes until each of the pairs of marginal nodes has reached a respective congestion and then its threshold value has been reduced to the step before the respective congestion occurred;

whereby traffic throughput of all marginal pairs of the network is optimized.

27. (previously presented) The method according to claim 26, wherein each pair of marginal nodes is defined as an ingress node and an egress node, or an ingress node into the network and an addressee node of the given transmission within the network, or a transmitter node of the given transmission within the network and an egress node from the network, regardless of traffic path and internal nodes for routing the given transmission between the pair of marginal nodes.

28. (previously presented) A method for setting limit values of an access control for limiting traffic transmission in a packet-switched communication network comprising a plurality of marginal nodes and a plurality of internal nodes, the method comprising:

identifying all pairs of marginal nodes in the network, wherein a pair of marginal nodes is defined as a starting and ending point of a given transmission in a given direction in the network, including an ingress node and an egress node, or an ingress node and an addressee node of the given transmission, or a transmitter node of the given transmission and an egress node, regardless of a path of the given transmission between the pair of marginal nodes;

estimating a traffic blocking probability for each pair of marginal nodes using a traffic model;

setting a traffic limit value for each pair of marginal nodes based on the traffic model so that no overload situation occurs in the network, and wherein the blocking probability for each of the pairs of marginal nodes is substantially the same;

operating the network with communications traffic;

raising the limit values on all of the marginal nodes, step by step, until a first overload occurs on one or more pairs of overloaded marginal nodes; and

reducing the limit value on each of the overloaded marginal nodes to the limit value at the step prior to the first overload, and not reducing the limit value on the remaining non-overloaded pairs of marginal nodes.

29. (previously presented) The method in accordance with claim 28, further comprising:

raising the limit values of all of the remaining non-overloaded nodes, step by step, until a next overload occurs on one or more next pairs of overloaded marginal nodes; and

reducing the limit value on each of the next overloaded marginal nodes to the limit value at the step prior to the next overload, and not reducing the limit value on the remaining non-overloaded pairs of marginal nodes.

30. (previously presented) The method in accordance with claim 29, further comprising repeating the steps of claim 29 in order one or more times.